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BATHING.

BATHING :

HOW TO DO IT, WHEN TO DO IT, AND
WHERE TO DO IT.

BY

EDGAR SHEPPARD, M.D.

MEMBER OF THE ROYAL COLLEGE OF PHYSICIANS, FELLOW OF THE ROYAL COLLEGE OF
SURGEONS, MEDICAL SUPERINTENDENT OF THE MALE DEPARTMENT OF
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PREFACE.

THIS pamphlet originally appeared as a *Review* of certain publications having reference to the Turkish Bath (the names of which are given on p. 9) in the *Journal of Mental Science*. It was afterwards published separately, upon the advice of friends, as containing in a condensed and popular form all the latest information concerning, and the most practical directions about, the important subject of which it treats.

The result has fully justified the advice given ; and the author is called upon to publish a second edition of his monograph.

He avails himself, therefore, of this opportunity to add considerably to the text, by which the pamphlet assumes more the character of a practical but compendious treatise.

An enlarged personal experience of six months, and the opening of his own Bath in Colney Hatch Asylum, where he has already treated upwards of 40 cases of insanity in various forms and phases, will give an increased weight and authority to the opinions here

expressed, and to the general views advanced on the subject of bathing.

However plausible may be the theories which relate to the varied treatment of disease, and however sanguine may be the views of enthusiastic specialists, they have no practical significance in this practical age, if they are not sustained by experimental facts, and elucidated by impartial enquiry.

This enquiry the author has made ; these facts have been yielded to him by the imperious realities of a great public institution.

He feels that he cannot more safely commend his opinions to those who are anxious to study the physiological and hygienic aspects of the Bath, than by placing under their eyes an extract from his own annual Report for 1865 to the Visiting Justices of the Middlesex County Lunatic Asylum, at Colney Hatch :—

“ At the close of my last report I spoke of the disappointment which I had experienced at the estimate for the construction of a Turkish Bath having so far exceeded the sum which the Committee felt justified in appropriating to it, as to necessitate its temporary postponement. More modest plans have met the financial difficulty. A Bath has been built, and was opened on the 26th of July. An account of this opening, with drawings and plans, has already appeared in the pages of a quarterly journal devoted to the specialty in which we are engaged. Since the above-mentioned date the Bath has been visited by

many strangers, who have heard of its construction ; and by Visiting Justices and Medical Superintendents from other Asylums, with a view of introducing the same therapeutic agent into the establishments with which they are officially connected.

“It will be remembered by the Committee that many of its members had a not unnatural mistrust of a power so susceptible of misapplication, and so shrouded in prejudices by the community at large. They will be glad, therefore, to learn from the individual who pressed it so strongly upon their favourable consideration, that the Turkish Bath in Colney Hatch Asylum has been an unqualified success. Its power in many forms of disease—especially in Melancholia—is most remarkable. Sleep is wooed by its soft influences, and morbid fancies are chased away. It does not appear (as far as my experience yet goes) to shorten the paroxysms, though it certainly mitigates the violence, of acute Mania. That it removes many obstructions from our path, and expedites ultimate recovery, is, however, as certain with respect to mania as melancholia. It is known to those who are familiar with insanity, that one of its most striking characteristics is a remarkable dryness of skin. In many cases there is a peculiar odour from the scanty dermal secretions, which has given rise to, and almost justified, the common saying, that ‘you may smell a madman anywhere.’ This state of things invites the action of the Bath. Dry epithelium is peeled from the human covering ; poisonous exudations crowd upon it

in crystal beads; and not by the lungs only, but by the neglected skin, is oxygen drafted into the circulating current of the blood.

“One of the most noteworthy things in connexion with the Turkish Bath is the dread with which many patients contemplate its earlier, and the satisfaction with which they regard its later, exhibitions. The measure of its enjoyment becomes the measure of its usefulness and success.”

E. S.

January, 1866.

BATHING.*

IT is as melancholy as it is strange, that the most important of our social customs are those which are most susceptible of being misunderstood in theory and misapplied in practice. One half the world, it has been remarked, is over-fed, and the other half under-fed. The misunderstanding of those comprised in the former section is gratuitous, the misapplication wilful. Those in the latter section cannot help themselves; they would only be too glad to misunderstand and misapply. But the result of this undeniable fact evidences itself in an amount of suffering and disease which constitutes an angry Nemesis. In the same way are misapprehended the principles, and perverted the application, of heat and cold in reference to the human economy. The entire subject of bathing is one about which European nations have little or no knowledge.

- *1. "Manual of the Turkish Bath. Heat a Mode of Cure and a Source of Strength for Men and Animals." From Writings of Mr. URQUHART. Edited by Sir JOHN FIFE, M.D., F.R.C.S., Senior Surgeon to the Newcastle Infirmary. London, 1865, pp. 419.
2. "The Eastern or Turkish Bath: its History, Revival in Britain, and Application to the Purposes of Health." By ERASMUS WILSON, F.R.S. London, 1861, pp. 167.
3. "Du Bain Turc, Modifié par l'Emploi du Calorique Rayonnant, et de son Introduction en Suisse." Par L. A. GOSSE, Père, Docteur en Médecine. Genève, 1865, pp. 151.
4. "A Short Description of the *Thermæ Romano-Britannicæ*; or, the Roman Baths found in Italy, Britain, France, Switzerland, &c." By ROBERT WOLLASTON, M.D. London, 1864.
5. "The Turkish Bath." (Read before the Medical Society of London.) By Dr. THUDICHUM. London, 1861.
6. "The Anglo-Turkish Bath; with Practical Suggestions, and When it should be Employed." By YORK JAMES MOORE, M.R.C.S., &c. London, 1861, pp. 51.

But ignorance has not been bliss ; it is not, therefore, folly to become wise. The bath, in its most comprehensive sense, is not restricted to the process of ablution. There are land-rats as well as water-rats ; there are air-baths as well as water-baths.

Few of us, indeed, have known anything about air-baths, and most of us have got to learn that the one is the best, indeed the only real, preparation for the other. And why have we been so ignorant ? Because the traditional absurdities obtaining respecting water and its application to the human system, whether externally or internally, have been so many and so monstrous as to conceal the true end and purpose of legitimate bathing.

Let us inquire a little what these traditional absurdities are, and do what we can to effect their dispersion. Let the bath be henceforth known to us as a life-giving process, crowned with health and luxury.

Now, wishing in sober seriousness to point out to English men and women of the upper and middle classes, what they are really doing to lay the foundations of disease in their young families, let us accompany them to one of our fashionable seaside watering-places. Hither come the young and delicate to drink in health from the breezes, and new life from the waters of the sea. Down to the bathing-machines day by day, in all weathers alike, under care of father and mother, or governess, or nurse, troop these poor creatures, to be soused by some remorseless old mermaid draped in blue serge. The cruel and ignorant, but well-meant injunctions of parents are strictly complied with—each little bather being thoroughly cooled before he is subjected to that which will make him shiver for hours afterwards. In other words, instead of acquiring caloric wherewith to meet the depressing shock of cold water, he is made to part with as much caloric as possible, because tradition has written with her iron fingers upon the nursery tablets, “Thou shalt not bathe when thou are hot.” What is the result ? See it immediately in the chattering teeth, the blanched cheeks and fingers, the numbed feet, of the young bathers, as they walk for hours afterwards upon the beach or esplanade—the strongest, perhaps, successfully, the weakest unsuccessfully—to restore the power of vigorous circulation. Every internal organ has been congested for varying periods, and the skin, which by a well-regulated bath should be brought into the highest play, has been shrivelled up into dry and functionless parchment. See the result afterwards, on the return home, in chlorotic looks, in

constipated bowels, in susceptibility of cold, in general languor, in vitiated appetite, in scurfy and unsecreting skin. This is no exaggerated picture. This is actually and absolutely the bath of the great majority of the upper and middle classes during a few months every summer. Where the means and opportunities of getting to the sea-side do not present themselves, the boys of each family observe in rivers and ponds the same rules under the strictest parental injunction. And when some unlucky youth returns home shivering and complaining of pain and languor—when the seeds of his deadly sowing are beginning to crop up in pleurisy, or pneumonia, or peritonitis, he is reproached with not having followed the advice given him, to *cool himself thoroughly before getting into the water*. Poor boy! he followed it too closely, and has thereby perilled his young life. Had he plunged into the stream “hissing hot” he would have treasured up for himself boundless health and vigour. We have witnessed this sort of thing over and over again in our younger days. It is only where the use of the Turkish bath is known that there is a chance of society being rescued from the perilous tradition to which we have first directed the attention of our readers. Dr. Leared appropriately alludes to this matter in the following terms:—

“One remarkable change of opinion has resulted from the introduction of the Turkish bath. Not five years ago it was generally supposed that to pass while in a state of profuse perspiration into water the temperature of the air in winter must be injurious or even highly dangerous. The dread of the contact of cold water to the heated skin was sometimes carried to a ludicrous extent. I well remember, when a schoolboy, having been taken to bathe with other boys, and, if heated by exercise, being compelled to wait in a state of semi-nudity until the point of regulation coolness was attained before entering the water. This refrigeration was, of course, the best possible foundation for bad results from bathing. It remained, however, for the Eastern bath to prove that the most profuse perspiration may be suddenly checked, not only without risk, but with positive advantage.”*

We are prepared to endorse this statement to the fullest extent. The vigour of the circulation and the heat of the body are the true measure of capacity for cold. The reaction from the shock of the sudden change is glowing and immediate, and, in a healthy skin, manifests itself in renewed transpiration. But there is no reaction to one who plunges

* “Manual,” pp. 276-7.

into cold water with a cold skin. There is not sufficient caloric to meet the peremptory demand made upon the system by the contact of cold water, and consequently no sense of that luxurious enjoyment which can only result from a well-balanced and duly-sustained circulation. If any one wedded to the tradition of his nursery tablet will adopt our suggestion, and plunge into cold water when his skin is bedewed with perspiration, and when he feels himself (so to speak) brimful of heat, he will at once erase the long-cherished and ancestral record, and learn for the first time the true luxury of a bath.

The dread which many persons have of a shower-bath, and of cold water in general, arises entirely from the distressing processes to which they have been subjected at some period of their lives by ill-advising friends. There is not one person in five hundred who likes, or ever did like, an ordinary shower-bath, taken in an ordinary manner, according to ordinary rules. But not one person in five hundred takes one in the proper mode, and with a correct knowledge of his own system, and of what water can do for it.

It is not upon creeping out of bed in the morning, that a chlorotic young lady, or a feeble youth, should be advised (as they so often are) to place themselves under the streaming tortures of cold affusion. The shock at such a time to delicate constitutions can hardly be overstated, or its power to do serious mischief. But after a romping game in the nursery before dinner, or a goal at foot-ball, or a ride in Rotten Row, when the quick pulses of young life are throbbing through every vessel, the shower-bath is of inestimable service.

The tradition which has tied generations in Europe to the necessity of an elaborate cooling process, prior to the contact of individual humanity with external cold, has been accompanied by another, which forbids the exhibition of cooling drinks when the system most needs them—in other words, when it is at the highest pressure of vital force.

“ ‘Oh! water—water!’—smiling Hate denies
The victim's prayer, for if he drinks he dies.”

And the Lecch left the burning thirst of the fevered Corsair unslaked. When does man most need water? When nature makes her most imperious demand: when she requires that the fluids eliminated by perspiration and other secretions shall be replaced. Here, again, the thirst, which is in the ratio of heat, is the measure of the capacity for cold. Cooling

drinks are for the hot and thirsty; heating drinks are for the cool and feeble. It is not to be denied that peculiar idiosyncrasies are occasionally met with (usually of strange temperament and impaired health) which constitute an exception to this rule. Such persons cannot bear cold drinks which are not "qualified" with something of a stimulating nature, however heated may be their circulations. But we live so artificially, and stimulate the poor stomach so frequently with what Mr. Banting calls "nightcaps," that the exceptions may be very frequent without invalidating the rule, which makes cool beverages most needed when the system is most heated by exercise or hot air.

These are the two great traditions of ignorance which have been religiously preserved to this generation, and which have stood between fully satisfactory and health-giving results from the ordinary water-bath in daily use amongst us. And yet, happily, with the advance of social science, and the increased supply of water by the great companies to all large towns in England, the passion for bathing has greatly increased; "baths and washhouses" are eminently successful. There are more clean skins (relatively clean), in the ratio of twenty-five to one, among the artisans of London than there used to be twenty years ago. This is a great move in the right direction. But more remains to be done yet. *The true bath of hot air, and then of water*, by which the skin is rendered *absolutely* clean, must become a great national institution. Before it our prejudices will fall, and our ignorance be dissipated. Our national life will be larger, our means of resisting climatic changes and repelling disease multiplied. We invite the rich and over-fed, by telling them that in the land where the bath has alone been preserved the agony of gout is unknown.* We invite the poor and the under-fed, by telling them that heat is life; that a porous and unscarfed skin is another lung in this smoky London; and that the more oxygen they imbibe the greater will be their capacity for the pressing duties of manual labour.

The introduction of the Turkish bath into England has unquestionably been one of the greatest events of this

* "Gout, a true blood-disease, is said to be unknown amongst the Turks; and this exemption is probably as much due to the free action of the skin caused by the bath as to their temperate habits. In estimating the value of the bath, however, as a curative agent, the special effects of caloric are to be taken largely into account. The effects of the higher degrees of heat possess a great, but as yet an almost unrecognised importance."—Dr. Leared, from the *Lancet*, November and December, 1863. ["Manual," pp. 259-60.]

century. As Admiral Rons says, "A new era has arisen." We need some modern Agrippa to second the efforts of Mr. Urquhart, and stud the town with these peerless temples of health and comfort. It is no easy matter, however, to make a practical assault upon the hereditary beliefs of a self-satisfied people, by proposing to them an institution which has only found its permanent home among a nation which Englishmen despise, at whose effeminaey they shrng their shoulders, and whose religious creed they regard with abhorrence. "Can any good thing come out of Nazareth?" Nor is it a light matter to overcome the prejudices of a profession the members of which regard themselves as the legally-constituted guardians of public health. Dr. Thudichum must have felt the force of this when, five years ago, he read his able monograph on the Turkish-bath before the Medical Society of London, and concluded in these words:—

"There is now great danger that this incipient design of restoring the hot-air bath in this country may be frustrated through interested motives and empirical innovations, and through the dull or superficial writings of 'an insufferable race of stupid people,' who are loading the press with the absurd productions of their lame imagination and lamentable ignorance. To guard against all these, and to avert the loss of this great discovery, I, for my part, gentlemen, have now put before you what I think right, and what we should develop. A boon to mankind, your nation, and every individual in this room, hot air, combined with cold affusions, with shampooing, with exposure of the body to light and air, await your approval as medical agents, and your application to those who are under your care. I hope that you will seize the opportunity, and secure for this society a share in the merit, similar to that of which Hippocrates was proud, of having introduced the bath in the treatment of disease" (pp. 15, 16).

To those who have no knowledge of the progress which the Turkish bath has made in this country, the following table of the relative number of bathers at the most important establishments in the kingdom will at once be interesting and surprising. It was compiled, towards the close of last year, by Mr. John Johnson, the able and intelligent manager of the Hammam in Jermyn Street, and embodied in a letter to Dr. Gosse, of Geneva, who was desirous of information upon the subject. Large as is this aggregate of 502,970, it must be remembered that it does not comprise the bathers at the smaller and less known public, nor those at the many private, establishments in the kingdom.

AGGREGATE NUMBER OF BATHERS AT THE UNDERMENTIONED
TURKISH BATHS IN ENGLAND.

Description of Baths.	How long Established.	No. of Bathers.
The Hammam, 76, Jernyn Street	2 $\frac{1}{3}$ years	72,000
Golden Square	In 5 months after opening...	6,000
Oriental Baths, Victoria Street	... 2 $\frac{1}{3}$ years	54,720
*Liverpool ... ..	... 2 $\frac{1}{2}$ „	7,875
Bradford ... ..	... 1 year	15,600
Sheffield ... ..	... 2 years	41,600
Stockport ... ..	... 1 year	7,875
Manchester ... ..	... 6 years	37,400
Ditto ... ..	... 6 „	24,960
Staleybridge ... ..	... 6 „	24,960
Newcastle Infirmary ... ..	... 5 „	23,440
Queen's Square ... ..	... 4 „	37,440
Kennington ... ..	... 4 „	41,600
Brompton ... ..	... 3 „	23,400
Southport ... ..	... 2 „	20,000
Keighley ... ..	... 6 $\frac{1}{2}$ „	60,000
Leamington ... ..	... 1 year	4,000
Total		502,870

The Turkish bath, then, is receiving a fair trial at the hands of our countrymen, and will eventually, we hope, become a recognized sanitary institution in every town and hospital. The literature of the subject has been tolerably prolific, and has at last culminated in the production of Mr. Urquhart's long-expected "Manual." If we do not exactly like the form of the work, and are not prepared to endorse all the crude physiology of our Eastern traveller, we are bound to express our gratitude to him for his arduous labours in the cause of science, and for the production of a book which cannot fail to be read with great interest. Mr. Urquhart is fortunate in having so able and zealous a lieutenant as Sir John Fife, whose practical experience of the bath has probably been greater than that of any other man in England.

It is curious that the application of caloric to the human system by means of the hot-air bath was used neither by the Romans nor the Turks as an agency in the treatment of disease. It was simply a luxury, felt to be a necessity of being, and so

* The author has received a letter from the manager of the Oriental Baths in Mulberry Street, Liverpool, denying the accuracy of these figures respecting the bathers in that large and important town. We are glad to find that the numbers have been understated. Mr. Gardener says, "Our numbers this year have reached to between 11,000 and 12,000. There is another set of baths in Liverpool, where at least 2,500 annually take their sweatings."

universally resorted to that sickness was comparatively unknown. If its effect was in any sense curative, that effect was produced unconsciously. "For the first time now, and in consequence of what has been done in England, the bath is dealt with in Turkey as a medical agent, as appears by a series of articles which has appeared in the 'Turkish Medical Gazette.'"* And this is probably due to the circumstance that the bath is gradually falling into disuse among the subjects of the Sultan. The bath ceasing to be a national custom, disease is becoming more a national visitation.

It is worthy of observation, as indicating how clearly the use of heat has been an instinct, that the hot-air bath is not known in regions where the temperature is so high as not to make it necessary. In other words, the ordinary atmospheric condition is a perpetual hot-air bath in the torrid zone, and the skin is exposed to the healthy influence of light and heat. The common belief that the Turkish bath is of Eastern origin is, like most popular beliefs, a fallacy. It was introduced into Arabia from Greece, and Mahomet strove to put it down as effeminate and impure. He coupled it (says Mr. Urquhart) with the graveyard, saying, "In these two I have no part." But in Western countries, where the body has been artificially covered up, the bath appears to have been almost universally a primæval institution:

"The whole of the north of Europe possesses it in one shape or another. The Red Indians of America have it; the Swedes have it; the Russians have it; the Fins have it; the Tartars, the Persians have it; the Celtic races possess the remnants of it in the Irish 'sweating-houses;' † the Gothic races originally had it too. But when you come down to the South it is no longer to be found."

The use of the bath, however, died out among the nations

* "Manual," p. 3.

† The following is an account given of the "sweating-houses" by an old gamekeeper:—"In the county of Fermanagh I could take you to ten or a dozen of them. They are built in the form of a bee-hive; turf is burnt on the floor till it is clear, then they close up the hole and leave it for a time. When you are going to take the heat, the turf ashes are swept out, and the floor covered with rushes. You go in, and get towels and wipe the sweat off, and so on, till it is time to come out. Some knowledgable body is there that tells you when to come out, and you then jump into a stream of water; or if there is no natural stream, water is led, and a hole made for it. There was a man there, a strong (rich) farmer, and he built one for himself, and brought water through it in pipes. These houses were first made by the ancient Milesians, long before your bath was thought of."—"Manual," p. 403.

of the West. Greeco now knows it not; when the Romans began to decline they, too, lost it, although Agrippa alone had built more than one hundred and fifty bath-houses in the capital, and there was once no Roman camp without abundant provision for the daily bathing of the soldiers in garrison. Mr. Urquhart is of opinion that the bath is now dying out in Turkey, where it has been preserved in sloppy impurity until the present day. Shall it find a permanent home, under more improved conditions, in a sea-girt island where the Romans themselves have left so many monuments of their greatness, where the climate is as variable (though not more so) as that of Turkey, where the inhabitants are prone alike to the diseases of luxurious indolence and grinding poverty?

Now let us inquire what are the great purposes to which the bath is subservient, and what are likely to be its effects when permanently established and generally utilized amongst us.

In the first place, the bath, properly understood, and used with the precaution arising from its being understood, is one of the best preservatives against disease. It anticipates evil. "*Comme agent préventif, je ne crois pas qu'aucun autre puisse égaler le bain turc judicieusement dirigé.*"* And in this crowding, pressing, business-like age of ours, when men will not find time for exercise, save at uncertain periods; when day by day are accumulated from excessive good living the poisons which afterwards manifest themselves in dyspepsia and gout, it is hardly possible to over-estimate the value of a process by which alone man is taught the true "dignity of the skin." Look at the shoals of "City men" who pour into London every morning by rail, and omnibus, and steamer, and leave again in the evening, utterly worn by the fatigues of the day. What is their daily round? Out of bed early, of necessity, though tired and sleepy; a cold sponge-bath—capital in its way, but not a true bath; meat-breakfast—rush to rail or omnibus—whirl up to Babylon; letters to write, business of various kinds to transact. Between one and two o'clock a sense of exhaustion, met by a hot lunch—in many cases a real and heavy dinner, with ale and stout, two or three glasses of sherry, and then again to business. At five or six o'clock there is a great exodus. Back again to their country residences go our mereantile community; many arms are open to embrace the well-fed citizens, and many choice dishes (a second dinner) tempt them to an indulgence of a most prejudicial kind. Perhaps on a Saturday our younger friends get a row on the river

* "*Du Bain Turc,*" p. 67.

or a game at Cricket—the elder ones a stroll with their wives and children. Our citizens grow fat and flourishing, but they are laying up for themselves the seeds of disease. There has been no real outlet; there has been no real elimination from a system unduly plied with stimulants and with food. If some discreet person suggests a Turkish bath, the answer may be, “Oh! I’ve no time;” or, “Baths don’t suit me—I get enough taken out of me in the City;” or, “I’m afraid of catching cold;” or, “I’m subject to rushes of blood to the head;” or, “Disease of the heart is in my family;” and excuses of a similar nature.

Now set aside your prejudices and give the bath a fair trial. If not a new man after the first, you shall at least be so after your second and third. Your skin will be brought into action in a manner which will astound you; and those who have analysed the sweat of first bathers will tell you how much more charged it is with impurity than that which exudes from the pores of a well-educated dermal surface.* Your body will be “ventilated” for the first time in life; its millions of pores shall stand with open doors and oxygenate all your frame; and when the process has been completed by shampooing and the cold plunge, you will experience what D’Ohsson happily phrases thus: “Un calme et un bien-être difficiles à exprimer—une sorte de régénération, dont le charme est encore augmenté par des boissons restaurantes, et surtout par un café exquis.”

It is worth while here to consider the nature of the objections raised to the Turkish bath, because the fact of their not being properly met constitutes a grave stumbling-block with many persons who would otherwise be too glad to find themselves pronounced fit subjects for its enjoyment.

Stout, flesh-making persons (under which category come many of our City friends) are wont to say, “I am afraid of a rush of blood to the head.” There is no evidence to show that such a result is produced by hot air. We have laid ourselves out to make inquiries upon this point, and we are persuaded that, beyond a sense of fulness on the first occasion of bathing, and on resorting to too high a temperature, there is nothing to establish the correctness of this objection. Once, and once only, we saw an elderly obese gentleman become flushed

* “In a chemical analysis of the perspiration of a group of bathers, recently made, that fluid was found loaded with saline and organic matter in the recruits, but was almost pure in the veteran bather: his blood was washed as clean as that of the working man who eats the bread of labour—that sweetest of all bread, the bread that has been earned with the sweat of his brow.” “The Eastern or Turkish Bath,” by E. Wilson, F.R.S., p. 57.

in the face. He complained of slight headache, and his nose began to bleed. But he was subject to bleeding of the nose when *not* in the Turkish bath, as also to a pain in the head. Congestion of the brain is much more likely to occur when the skin is cold and its pores closed than when it is tingling with vigorous circulation and exuding streams from its surface.* Since the opening of the Turkish bath in Colney Hatch Asylum, we have subjected upwards of forty patients, all of them with head-symptoms (*i. e.*, insane), to its beneficent operations, and we have not met with a single instance in which cerebral disturbance has been increased. It is worthy of note that the forehead is that portion of the skin which first perspires; it is frequently bathed in exudations in ten minutes after entering the hot-chamber, and long before any other portion of the skin gives indication of moisture. The relief to the system by the loss of fluid is highly beneficial in its action to those overcharged with adipose tissue. Mr. Urquhart triumphantly quotes Mr. Banting, the "type of obesity," and the furnisher of jokes to our pantomimes, who says, "The restoration of the bath is the greatest blessing which has fallen upon man for the last thousand years." We give the following extract from one of the dialogues between Mr. Urquhart and his friends:

"*Mr. Rolland.*—Since I have had a bath of my own, taking it daily, I have not increased my usual amount of exercise, nor altered my diet, and yet I am four inches less in girth; my weight has been brought down from 14 stone to 12 stone 7 lb. But in regard to the use of dumb-bells, to fencing, and tennis-playing, there is not the slightest comparison as to what I can perform before and after I have had a bath.

"*Dr. Thudichum.*—Let any one go to the baths, and ask questions there. He will find dozens of persons attending them for the very purpose of reducing their obesity. Thirty-six pounds is the highest I have heard of from the person who has experienced it. But if a man goes to the bath, and feeds like a pig all the time, it is quite clear that that person will increase in fat. Therefore, if a person will live properly, there is no

* A patient thus writes:—"To corroborate my former statement as to the efficiency of the Turkish bath as a remedy for fulness of blood in the head, from which many middle-aged persons of the learned professions are apt to suffer, I am still in the habit of taking a bath twice a week, to ensure a cool forehead. I am aware that an erroneous impression exists about the Turkish bath causing rushing of blood to the head and eyes, whereas my experience is that the warmth of the bath causes an even circulation—a circulation which is felt even before the heaviness affecting the head and eyes begins to go off."

doubt that the bath will increase the fibre, and decrease the dead matter we call fat.

“*Dr. Leared.*—I had in mind the popular notion that the fatness of the Turk is due to the bath.

“*Mr. Urquhart.*—The assumption that the Turks are fat is as groundless as that their climate is dry. The safe rule in all such cases is to take the contrary of a popular notion.”*

And Mr. Urquhart says elsewhere that the Turkish women, taking little or no exercise, would undoubtedly become fat if it were not for the depurating process of the bath.

For ourselves, respecting this important question of leanness and obesity, we have remarked what may be termed the *adaptiveness* of the bath to the two extremes of animal development. A thin and emaciated patient will enter the sweating-chamber terrified at the idea of losing more *matériel* than he has already lost, and wondering where and how he is to recover that of which it is proposed to deprive him. But, somehow, after perspiring profusely he has more energy. In a few weeks he makes sensible progress. Whether by the process of sweating something has been eliminated from his system which forbade the proper assimilation offered is not known; but certain it is that emaciated persons will rapidly gain flesh after a few Turkish baths, and seem to enter upon a new life. We have under our eyes several most remarkable instances of this fact at this present period.

On the other hand, persons surcharged with adipose tissue will lose flesh by sudorification. This is not so invariable as the converse proposition. Stout persons in robust health soon recover what they lose in weight, unless they are careful in the matter of diet and exercise. If advantage is taken of that which the process of depuration *enables* a stout person to do, he at once arms himself with additional weapons wherewith to combat the hydræmic diathesis. Failing to do this, his loss in weight by a single bath is made up by a single dinner, and he still preserves that Falstaffian rotundity which is due partly to a constitutional tendency and partly to his own self-indulgence.

Another favourite objection taken to the bath is the fear of catching cold after leaving it. This happens to be just what no one ever does. The bath is the best preservative against vicissitudes of temperature. It imparts a vigour and a power to resist cold, which are as remarkable as they are undoubted. Ask the *habitués* of the bath whether they ever catch cold; ask the shampooers the same question, and learn from them also

that they have no occasion to clothe themselves so much as those who have coverings which are so neglected by their possessors as to be unworthy of the name of skins. Again, "It is a common experience" (says Dr. Thudichum) "that persons liable every winter to attacks of catarrh, bronchitis, or neuralgia, acquire a perfect immunity from these complaints."

Again: The alarm of those who have actually organic disease of the heart, or, at all events, an hereditary tendency thereto, is natural, and such as to excite our sympathy. There is an unmistakable dread of the hot-air bath under these circumstances, arising from a fear of undue stimulation of the circulatory system. But it is remarkable that the very contrary effect is produced in these unfortunate cases—the bath tranquillises and subdues.

"I find," says Mr. Urquhart, "that in the bath, persons suffering from disease of the heart obtain instant relief, although the number of pulsations is increased. It is just as in the case of a steam-engine going down an inclined plane; the piston works more rapidly because the work is done for it. The skin comes to the aid of the heart and lungs."*

Dr. Goolden, of St. Thomas's Hospital, has been greatly struck with the influence of the hot room in quieting the circulation, in some cases of palpitation of the heart. Dr. Thudichum has noticed and recorded the same fact.

There is also a large class of persons who object to the use of the bath on the supposition that it is exhausting. "We are already sufficiently feeble and exhausted; we do not want any further reduction of vital force." But the bath is not exhausting, because its salutary influence is not measured by its power to produce abundant sweating. Mr. Erasmus Wilson says that one of the most remarkable properties of the bath is its ability to destroy the sense of fatigue and exhaustion: and our own experience fully confirms this statement. Such a supposition can only have arisen from an entirely mistaken view of the nature and character of the bath. "Talk to a working-man," says Mr. Urquhart, "about perspiration being 'lowering,' he will laugh at your face." It does, indeed, produce "purgation by the skin," in obese and hydræmic subjects, and, occasionally, a temporary sense of exhaustion; but in spare, nervous, and delicate subjects its effect is altogether of a different kind. There is little sensible loss of matter, but an invigoration arising from the contact of the now unscarfed skin with particles of caloric, and from the newly-acquired

* "Manual," p. 16.

power of drinking in oxygen through channels previously choked up. Mr. Moore thus writes of his experience:—

“I would record my own especial obligation to the bath on various occasions. I have frequently resorted to it, with immediate relief, when suffering temporarily from some of the minor evils which ‘flesh is heir to;’ and *after excessive fatigue, mentally or bodily, I have invariably found the most soothing and refreshing effect from its use.* I ascribe to the frequent application of heat, in the form either of hot air or vapour, immense relief from a very depressed condition of health to which I was reduced by long-continued neuralgic and rheumatic pains, associated with deranged liver.”*

“It is a grave error to call the bath a process of sudorification, because in this term the other effects of the bath are lost, the most important among them being the caloric stimulation of the sympathetic system.”†

Having thus pointed out how the Turkish bath is a polished luxury of civilized life, a cleanser of the skin, a depurator of the blood; how it imparts a healthy stimulus to the exhausted, and a sense of salutary unloading to the plethoric and obese; how, in short, it is in these varied aspects a true preservative, we proceed to consider what it is capable of effecting in those abnormal conditions which constitute disease.

The question of disease of the heart seemed to be so inseparable from that of sensations of temporary irregularity of circulation, where no real disease exists, that we have already alluded to these two conditions conjointly, and shown what is the general opinion of those who have had experience of the bath in its application to derangements of every kind. We may here, however, add one important statement by Dr. Thudichum:—

“A similar case of dropsy from heart disease, with a pulse of 170, almost moribund, has come under my notice. The patient was kept in the bath one day and one night; afterwards at intervals; within a week his pulse had become slow, averaging 75, and the patient was able to walk about the garden. Two cases of palpitation of the heart, unaccompanied by valvular disease, have come under my observation, in which a low temperature of the bath mitigated the palpitation, but a higher one removed it; so that while rapidity of motion remained, the inconvenience and mental uneasiness were removed. The weight seemed to be taken off. With this experience I am glad to find the records of the Newcastle

* “The Anglo-Turkish Bath,” p. 53. † Dr. Thudichum’s paper, p. 8.

Infirmaries fully agree. They state that the *extreme heat* exerts less influence on the heart and circulation than the ordinary warm-water bath. In some cases in which the pulso and stethoscopy gave unmistakable evidence of heart disease, the patients have undergone the process *without attendant mischief*, and with *unlooked-for benefit*.*

Closely allied to the disease of the heart is disease of the lungs, comprising that fearful malady consumption. Now, whatever doubts may exist as to the power of the bath to *cure* consumption in an advanced stage, or even to arrest its progress, there is good reason to suppose that much benefit may be derived from its judicious application in the earlier phases of the disease, and in all subjects gifted with the terrible inheritance of phthisical proclivity. And this property must be—

“Based” (as Mr. Erasmus Wilson expresses it) “upon its [the bath’s] powers of altering the chemical and electrical conditions of the organic structures of the body, and abstracting its fluids. The whole of these changes take place simultaneously, and, no doubt, harmoniously; but in certain instances we may rely upon a greater activity of one of those processes over the other two: for example, in neuralgia, the electrical power should preponderate; in the destruction of miasma and poisonous ferments, the chemical power; and in the slow removal of accumulated morbid deposits the fluid-abstracting power.”†

In an able paper read before the Harveian Society, Dr. Toulmin pointed out the importance of the functions of the skin in the pathology and treatment of tubercular consumption. By eliminating poisons through its pores we restore its respiratory action, and so enable it to assist the lungs in their important functions. It may be answered by some objectors that in the latter stages of phthisis profuse sweating is one of the dreadful symptoms which we have to combat. But Dr. Leared distinctly states:—

“The direct action of the bath has been more strongly shown in removing night-sweats than in any other symptom. In several other cases I have recommended the hot-air bath for this distressing symptom. A patient, who had been drenched by night perspiration, told me recently, that after having taken a bath which I advised for him, he had no return of them, and several days had then elapsed.”‡

It is also stated by the same physician that the presence of

* Op. cit., p. 14.

† Op. cit., p. 142.

‡ “Manual, p. 275.

hæmoptysis does not contraindicate the use of the bath, for he has seen patients benefited thereby. In his monograph on the Anglo-Turkish bath Mr. Moore says:—

“It may be, comparatively, but very small aid the skin can afford the lungs in conditions of disease, but surely that little must be all-important at such a time, especially when we remember how wonderfully Nature will for a time encourage her requirements, and how, if an organ is temporarily, only partially relieved from its work when inadequate to the performance of its full function, it will often recover its vigour. Cod-liver oil is, doubtless, a most valuable remedy in tubercular disease; and it is efficacious in proportion to the capacity of the lungs to permit of the absorption of oxygen from the atmosphere, to secure the chemical changes resulting in animal heat. Hence it follows, of what moment it is if any organ can be brought in a condition *to assist* in this important work; and, as has been shown, this may be considerably effected, by stimulating the skin to its respiratory functions. If, then, in the early stages of phthisis the skin can be employed *in any degree* to relieve the lungs in the manner described, it must be highly important that it should be put in the best possible condition to fulfil its requirements, and be stimulated to the healthy exercise of its functions. To effect this the Anglo-Turkish bath is certainly the most powerful, if not the only, means. In this brief consideration of the bath, with reference to pulmonary disease, its important eliminative and derivative properties must be remembered, as ridding the system from the effete and deleterious substances, as well as its other physiological operations.” (pp. 43-4.)

By the “Report of the Newcastle-on-Tyne Infirmary for 1860,” it appears that the distressing night perspirations of phthisis were checked by the hot-air bath, followed by cold affusions, and that the chronic bronchial affections of old people were greatly benefited.

From what has been already advanced, it will be easily understood how beneficial must be the action of the hot-air bath in those dropsical effusions which are the result either of diseased heart or kidneys. In every case of this kind the excreting power of the skin is reduced to a minimum, and carbonic acid and urea accumulate in the blood. That which most powerfully eliminates and derives, and restores the equipoise between solids and fluids, is obviously the most needed remedy. There is no instrument known to modern science which can compare with the bath for effecting these results. Drs. Goolden, Thudichum, Leared, Wollaston, Lockhart Robert-

son, Sir John Fife, Messrs. Erasmus Wilson and Moore, with many others, are unanimous on this point, and have placed on record remarkable illustrative cases. Dr. Lockhart Robertson, the medical superintendent of the Sussex Asylum, in a letter to Mr. Urquhart, says :—

“When you were at Hayward’s Heath the other day I showed you a patient, M. W—, who was admitted here on the 23rd of February, 1863, apparently in a state of confirmed dementia, unable even to tell his name; restless and destructive. He was much reduced in health, and there was dropsy of the lower limbs, with albuminous urine of a marked character. The patient gradually got worse, and after he had been a month in the asylum I sent him to the bath almost as a forlorn hope. The result of a month’s treatment of the bath, twice a week, was that the dropsy disappeared, that no trace of albumen is now to be found in the urine, and that the man is apparently convalescent. You will remember seeing him here at his work as a carpenter.” *

And since this is the record of an accomplished physician to an asylum for the insane, we may here at once allude to the beneficial effects which are likely to accrue, and have already accrued, from thermal agency in the treatment of mental disease. Ireland was that part of the United Kingdom where the bath first found a home through the instrumentality of Mr. Urquhart and Dr. Barter; where it has been received with less disfavour and prejudice than in England, and where its results in the treatment of insanity are best known. It has been introduced with marked success in many of the Irish county asylums. Dr. Power, the resident physician to the Cork Asylum, was good enough to show us his Turkish bath two years ago, and communicated to us his great satisfaction at the results which he had hitherto achieved through his agency. In England, at Colney Hatch Asylum, a bath has been constructed, and we have already successfully treated upwards of forty cases. Dr. Robertson’s experience at Hayward’s Heath is confirmatory of our own, and is so satisfactory that we hope, in a few years, no county asylum will be without the opportunity of confirming his important evidence. The functional disturbances which are leagued so extensively with insanity, the imperfect nutrition of the brain, and, above all, the peculiar condition of the skin, invite the action of the hot-air bath, on reasonable grounds, with abundant promise of success. Dr. Robertson alludes to the latter symptom as one

* “Manual,” pp. 350-1.

specially met by the application of the bath, which has "a specific power to remove the noxious secretion of the skin, so frequent with the insane, and which, in the asylums of twenty years ago, one could recognise as distinctly as the smell of a dog-kennel, and which still sometimes refuses to yield to ordinary ablution." The bath is calculated to remove this unpleasant complication. This peculiar factor would seem to be owing, according to Dr. Thudichum, to a crystalline deposit round the mouth of the sweat glands, which becomes decomposed, producing carbonate of ammonia, in combination with volatile acid; and he says that healthy fresh sweat from a clear skin has a most agreeable odour, or none at all.

It need scarcely be said that an agent which has so special an influence on the skin must be calculated to afford special relief to the various diseases of that important issue. Whether the multiplicity of these diseases is owing to the new function given to the skin by Mr. Urquhart,—who says that by it, and not by our stomachs, we digest our dinners,—we do not pretend to determine. It is a problem much too elaborate for our apprehension, and we commend it to the consideration of Mr. Erasmus Wilson. This gentleman, however, is in a position to furnish us with much evidence on the application of the bath in the affections which he has made his specialty; and his testimony, together with that of other observers, is to the effect that it is a very powerful auxiliary in chronic affections of the skin. "I have known eczema removed," says Dr. Thudichum, "in two baths. A list of skin diseases are already known, which yield to the bath as intermittent fever does to quinine."

For cancer, also, the bath has been vaunted as a cure. If there is a disease of which we know nothing, and against the ravages of which we can do nothing, it is that sad inheritance which seems to encroach alike upon the domain of skin and gland, and involve, indeed, every tissue in its insidious march. We do not think there is any evidence to show that the bath can help us here. There has yet, indeed, been no sufficient opportunity of experiment. Whatever it may ultimately become, the bath is not yet a universal panacea, and we think injury is done to the cause of its advancement by attempting to associate it, upon insufficient testimony, with a disease which seems to be almost the exclusive property of the charlatan and quack. It is worthy of observation, however, that (according to Mr. Urquhart) "cancer is unknown in countries where the bath is in use, as also in countries where, the bath being unknown, the temperature is such that ex-

cretion by perspiration is active." It is right, also, to add to this statement the remarkable circumstance noticed by Dr. Thudichum in the following passage:—

"Cancer offers some remarkable features. I found cancer-juice to be full of chloride of sodium. The bodies of cancerous persons contain an excess of this salt. Whatever the relation, cancer and excess of salt coincide. Is the kidney unable to rid itself of salt because the skin retains its portion? Is cancer of the stomach so common because this organ, surrounded in and outside with chloride, cannot escape its irritating influence? The cancerous tumour offers features only found in vegetables; alone of all tissues it drains a juice when heated. Here are questions pregnant with results when investigated. Under any circumstances, the bath will remove conditions accompanying, favouring, or perhaps producing that awful disease, cancer. The bath will rid the body of excess of chloride of sodium in the tissues."*

It may perhaps be inferred (as Mr. Urquhart suggests) that cancer owes its origin, like its cognates, scrofula and tubercular phthisis, to the habits of modern Europe; "that is to say, to the inclosure of the body in warm and close-fitting vestments, to the exclusion of air from the apartments, to the over-supply of food, and to the frequency of the efforts called for from the stomach for the purpose of digestion."

We pass from this painful and distressing malady to one of an equally intractable character, and which, when associated with mania, Esquirol called "*le désespoir des Médecins*." We do not expect any good results from the use of the Turkish bath in epilepsy; and we think it of importance that those who are the unhappy subjects of it should avoid, both for the sake of themselves and others, entering public establishments. If they bathe, let them do it privately, and yet attended. We are led to this remark by the circumstance that several epileptics have had their characteristic seizures when at the Hammam in Jermyn Street. A sudden fall on the marble slab might produce fracture of the skull, and be fatal to themselves; and an epileptic fit is at all times very alarming to the general community. It is most unfair to other bathers, and most unjust towards the proprietor of a bath, that epileptics should bathe in public. The uninitiated, on seeing a fit, naturally enough attribute it to the effects of the bath, and thus a grave wrong is done to many. The bath is as yet on its trial in this country, and it is entitled to that fair and

* Op. cit., pp 10-11.

generous consideration which we accord to every other foreigner who seeks a refuge on these shores. We are so particular ourselves upon this point that we never give the bath to epileptics. A fatal casualty from a fit, though having no connection with the bath in the relationship of cause and effect, might prejudice every inmate of a large institution against it, and so impair its usefulness in the future.

It is unfortunate that, as yet, so small a proportion of bathers in England are females, for there is evidence to show that in a very large class of diseases to which women only are obnoxious, the effects of hot air are most satisfactory and successful. We pointed out, at the commencement of this article, how much injury is done to young girls by sea-bathing in the popular mode. Uterine and general visceral congestion, with blanched surface and feeble circulation, are the sequels of a fashionable custom, which, as at present carried out, has no single recommendation. The hot-air bath, followed by cold affusion, would produce results the very opposite of those effected at our fashionable watering-places. The pallid features of chlorosis and amenorrhœa would merge into the roseate hues of health; the languor and lassitude, so characteristic of functional derangement of the uterus, would yield to an energy and a force worthy of Diana Vernon and an age of "muscular Christianity." "I have employed it (the bath) in cases of amenorrhœa and chlorosis with marked benefit," is the evidence of Mr. Moore.* Dr. Lockhart Robertson, in a letter to Mr. Urquhart, says:—

"In irregularity of the uterine functions, which in young girls is sometimes complicated with mania, I have found in several instances a cure follow the restoration, through the agency of the bath, of the healthy uterine action. Setting the mental symptoms aside, I would here say, that if the bath had only this one remedial power of restoring suppressed menstruation, its value in restoring the ills resulting from our high civilization would be still great. I have within the last two months discharged two young girls cured, who for many months suffered from maniacal symptoms connected with irregular menstrual action."†

We should like to see a thermal establishment attached to every large "seminary for young ladies," and to make it a penal offence for governesses to give (as is so commonly done) blue pill and drastic purgatives to their pupils. The constipation, the vitiated appetite, and even the uterine disturbance

* *Op. cit.*, p. 53.

† "Manual," p. 350.

itself, so often met with in young girls after they have left school, are frequently the result of this pernicious habit, for which a fitting substitute would be found in the well-regulated application of caloric to the human frame.

It would appear from general testimony that zymotic diseases yield speedily to the treatment of the bath. A high temperature seems to have the power of destroying the germinating property of the poisons which so prostrate and subduo. "It is pre-eminent, and supersedes all other means of cure." "Heat must beat cold," said the late Lord Dundonald to Mr. Urquhart, who was a sufferer from ague on board the noble lord's steam-yacht. With these words he carried him to the stoke-hole and stopped the fit, and cured one of the first Europeans of this complaint by heat. 'This experience has borne wonderful fruit in the Newcastle Infirmary. "In regard to ague," says the house-surgeon, "I have several times witnessed the aversion of its paroxysms by placing the patient in the bath prior to the onset of the rigor. By this means alone the essential features of the disease have been removed, and quinine has been used as an ordinary tonic for the remaining debility." Dr. Gosse, of Geneva, also received at the hands of Lord Dundonald (then Lord Cochrane) the same treatment as Mr. Urquhart, and records it in the following terms :—

"Les cas de fièvres intermittentes traités avec succès par l'étuve sèche ne sont pas rares, et l'application en a été faite pour couper court à la période algide. Moi-même, j'en avais déjà fait l'expérience en Grèce. Ayant réchappé miraculeusement à Poros à deux accès d'une fièvre pernicieuse rémittente et contagieuse, je parcourais les îles de l'Archipel, lorsque je fus rappelé à Nauplie par l'Amiral Cochrane, qui s'y rendait sur un petit yacht à vapeur. Etant à son bord vers le soir, l'air frais du golfe et les miasmes des marais de Lerne, réveillèrent une attaque violente de fièvre algide, qui pouvait faire craindre une issue fatale. Lord Cochrane eut la bonté de me prendre dans ses bras et de me transporter dans la soute du bâtiment, auprès du foyer ardent de la chaudière à vapeur, me frotta, me massa, et me fit transpirer abondamment. Les accidents disparurent comme par enchantement. Dès le lendemain je pouvais vaquer à mes occupations et faire usage de la quinine comme préservatif. M. Urquhart, qui se trouva plus tard atteint d'une fièvre d'accès à bord du yacht, fut traité et soulagé de la même manière que moi, par l'excellent amiral."*

If a remedy will meet the demands made upon it by the

* "Du Bain Turc," p. 58.

subjects of gout and rheumatism, what a large class of votaries will it not secure ! These are the last special diseases to which we purpose drawing the attention of our readers in connection with the thermal application of caloric. And they seem to us to be the most important, because even the worst cases are susceptible of temporary relief and immediate comfort, if not of permanent cure.

"Diseases of joints, particularly the gouty forms, are cured and mitigated," says Dr. Thudichum. Gout, on the whole, exhibits a yielding tendency. A temperature of from 160° to 175° acts as a complete anæsthetic to the local pain of the paroxysm ; but it also removes the primary cause of gout by favouring the re-absorption of deposited urates, and their combination with oxygen, by which they cease to be injuries to the frame. Oxalic acid, a prominent product of this oxygenation, has been found in the sweat of gouty persons."*

The house-surgeon to the Newcastle-on-Tyne Infirmary bears most emphatic testimony to the benefit derivable from the bath in the treatment of acute and chronic rheumatism ; "since cases that would have been perhaps confined to bed for weeks, under ordinary treatment, were enabled to sit up in a few days."

"You speak," says Dr. Millingen, "of the temperance of the people as being pointed out as the principal cause of gout being hardly known in this country (Turkey). If this is partly true, on the other hand, I must remark that intemperance of late years is much on the increase ; and, moreover, that it is carried on to an extent which, if stated, might be looked on as fabulous. Yet the gout is not present, or delirium tremens either. This immunity I can attribute to nothing else but the expulsion of the alcohol circulating in the system, by the lungs and skin, during the stay in the bath."

Mr. Urquhart has, unfortunately, a personal and individual knowledge of the tortures of acute rheumatism. Nothing can exceed the beneficial effects of the hot-air bath in this distressing malady, especially when forced to a high and radiant temperature, and the analogy of treatment in ordinary use amongst us will explain on reasonable grounds where the success lies. Heat is the great comforter and depurator ; and the "bath is heat." Wrapt in its soft and voluptuous embrace, the particles of caloric seem to electrify every fibre of the rheumatic, and permeate his every pore. The dry and contracted limb becomes moist and supple, and the torturing poisons of mortality are distilled into thin air.

* "Op. cit., p. 14.

Having thus considered the bath as a preservative *against* disease, and a destroyer *of* disease, having disposed of the objections to its adoption which are raised by the ignorant and the prejudiced, we proceed to notice some of the processes of the operation itself, and offer a few remarks (justified by a considerable personal experience) upon its general agency. However perfect may be the material construction of a bath, there are various hindrances to its perfect utilisation, dependent upon the characters of the attendants, their correct knowledge of their duties, the timidity or rashness of bathers themselves, the temperature of the various chambers, the time of bathing, and the condition of those who seek health and comfort therefrom.

1. The individual and personal amount of animal heat possessed by each bather on entering the bath is a matter of much importance. It is true that the bath in many cases is a substitute for exercise, as largely illustrated in the country of its adoption—Turkey; but it is not wise to have undue reliance upon this means of replacing the invigorating influence of muscular action. The infirm and the crippled of necessity are prevented from taking the amount of exercise requisite to ensure the free development of heat. But it is not so with the great mass of bathers, and we strongly advise every one who has the opportunity of doing so to send the blood swinging into his capillaries before he enters an artificially-heated chamber. The time of waiting for the fleshly dews is thereby lessened; you are soon bathed in perspiration, and with a less sense of fatigue than under opposite conditions. To many bathers this circumstance will make at least half an hour's difference in time, and to all it will involve a more beneficial and successful issue from the bath.

2. A very important question is the amount of artificial heat which different individuals are capable of bearing; and here we may state at once that every man's capacity for supporting a high temperature is much greater than he supposes it to be. As he becomes habituated to the bath every novice will make this satisfactory discovery. In the ordinary Turkish baths now met with in this country there is but one hot chamber which has, perhaps, an average temperature of 130° —the *pons asinorum* of bathers. In some baths there are two hot chambers, averaging, respectively, 120° and 150° . At the Hammam in Jermyn Street, which has been correctly described as “the finest bath in the world,” there are four hot chambers, the first of which is about 120° ; the second about 150° ; the third about 175° ; and the fourth (a recent addition,

a chamber of radiation) ranges from 180° to 220° . The usual proceeding (and the proper one for beginners) is to enter the lowest chamber first, and to remain there until the skin begins to get moist; a move is then made to the second chamber, beyond which comparatively few have any need or desire to advance. Rhenmatic subjects, and those of peculiar skin idiosyncrasies, find advantage from the third chamber, but with many it has the effect of drying up the perspiration and closing the pores of the skin. But it is very remarkable that this result is not equally produced by the still higher chamber of radiation. For reasons also which appear as yet to be unexplained, persons are more tolerant of a great heat (say 200°) directly radiated from a stove in the chamber, than of a lesser heat (say 180°) of what is termed, in technical phraseology, transmitted heat. Dr. Goolden and ourselves noticed this fact on the occasion of the opening of the radiating chamber in Jermyn Street. We wrote in a letter to Mr. Urquhart: "The room was at a temperature of 205° when we entered, and felt much less oppressive than the hot room of transmission upstairs, at a temperature of only 170° ."*

Mr. Urquhart himself writes: "This I can say, that such heat (radiated) is more endurable than common heat. There is a liveliness about it which transmitted heat lacks. You are conscious of an electrical action. It is to transmitted heat what champagne is to flat beer."†

It is probable that this toleration of radiated heat may find its solution in the increased dryness of the atmosphere, the chief requisite for electrical isolation. Professor Tyndall is of opinion that Mr. Urquhart's preference for dry over moist air is "justified by philosophy as well as practice." We are not at all certain that the ordinary gradation from low to high temperature is not a mistake for *habitués* of the bath. The plan which we ourselves adopt is to proceed to the radiating chamber first, and we know many bathers who adopt the same practice as ourselves. Profuse sweating is then really a matter of fifteen or twenty minutes—not more—and we are in a condition to proceed to the chamber of 150° , where, after remaining for a few minutes, we are ready for the process of shampooing. The bath is thus got through with wonderful rapidity and without loss of time. And the chief reason for the adoption of this plan of inverting the order of gradation is, that we find ourselves more capable of bearing an elevated temperature when the circulation is at its highest, and no sense

* "Manual." p. 412.

† "Manual," p. 328.

of languor has been produced by the intermediate chambers. There is no necessity to remain in the hottest chamber long. Five or ten minutes will bring up the capillary circulation, and the bather, if he finds the heat greater than he likes, may satisfactorily complete the process of sudorification where the thermometer is at a lower range. We have little doubt, from what we have observed at the Hammam, that many of those who, after remaining a long time in the first chamber, essay the higher ones (either of transmission or radiation), and find an immediate sense of exhaustion, would have beneficially borne the latter as a thermal initiation. We commend this suggestion to the consideration of bathers, by way of an experiment.*

There is one circumstance which we think is not sufficiently borne in mind by those who seek for health and "condition" in the bath, and that is the importance of perfect repose and tranquillity during its operation. We like to see a man take his book or his newspaper with him, smoke his cigar, and sip his coffee, waiting quietly for the welling-up of his living streams. With a view to facilitate this, more light might be thrown into the hot chambers at the Hammam, where it is difficult to read when the weather is at all gloomy and overclouded. In many the sudorific process is retarded by constant fussiness, running to and fro, anxiety as to whether this is right or that is wrong, or how long they are to "wait for the moving of the waters." These irritable creatures should bathe in private, and not disturb the enjoyment to their neighbours of a beneficent luxury.

We now come to the process of shampooing—*le massage*, as the French phrase it, and which in that language Dr. Gosse well describes :—*Le massage consiste en une série de manipulations exercées à la surface de la peau, et dont l'action mécanique, peut-être électrique, favorise diverses fonctions du corps, soit dans l'état de santé, soit surtout dans les cas de maladies.*"†

To the uninitiated the shampooing is the great mystery of the bath, about which they have heard, and from which they

* The author has seen reason to alter his views respecting the relative merits of dry and moist heat. He is persuaded that as a general rule persons are much more tolerant of a heat slightly charged with moisture. They perspire more rapidly and more profusely, and the mucous surfaces of the eyes and nostrils are not irritated as by the drier temperature. There are many who will not perspire at all under a temperature which ranges above 160°, and which is quite free from vapour. This circumstance is specially noticeable in the harsh and unhealthy skins of the insane.

† Op. cit., p. 101.

expect so much. But its operation is greatly over-estimated, and its effects are greatly exaggerated. The highly-educated skin of an habitual bather in perfect health needs little or no shampooing. It is otherwise, however, with novices, whose skins bear about the same relationship to that of an *habitué*, as a dry and arid common does to a rich and well-cultivated meadow. But to the diseased, and especially to the rheumatic, the shampooing, when properly performed, is a most beneficent operation. Yet how few are there who know how to shampoo properly. A good shampooer is worth his weight in gold; a bad one is worth less than nothing. It is to be feared that sufficient attention is not paid to this process, and that proper instructions are not given to a new hand, by those whose experience has given them a correct knowledge of the sensational geography of the human frame. It has been the fashion for Eastern travellers to speak extravagantly of the shampooing, and to measure its success by its violence; and many strangers to the bath, on the occasion of the first visit, have a kind of wondering dread as to what they have to expect. "You are laid out at full length," says Sir Alexander Burns, in his "Travels in Bokhara," "rubbed with a hairbrush, scrubbed, buffeted, and kicked: but it is all very refreshing." The late Mr. Thackeray speaks of the process which he experienced at Cairo, and strongly demurs to its agreeableness. The following is a pleasant description of what an Eastern traveller experienced in a Moorish bath at Medeah. It will be seen that, like the baths of the Turks, the atmosphere is highly charged with vapour. The bath now being restored to ourselves is the dry hot-air bath of the Romans, but we caution bathers against acquiring too extravagant notions of an atmosphere of extreme dryness.

"The pavement was flooded with hot water, and at first the heat was so oppressive I could hardly breathe; but the feeling went off after having been seated for a few minutes on a stone bench in the centre of the bath. We were now all laid out in a row on the pavement, each stretched in a blue cloth, with a rolled-up towel under the head, and an operator for each person. My attendant was a musical character, for when he commenced shampooing he accompanied his labours with a song, marking the chorus at the end of each verse by a punch of extra force. Being well soaked and softened, I was now scrubbed with a camel's-hair glove, until I felt as if I had no skin at all. I then had my legs and arms pulled; my head screwed round with a jerk; was then doubled up like a boot-jack, by his kneeling on my shoulders; my arms were brought behind me,

and while his knee was forced into the hollow of my back, two or three dexterous twists put in motion each rib and vertebra; he then finished by endeavouring to crack, separately, every toe and finger.”*

Now this is unquestionably the traditional shampooing of the East. We have ourselves experienced the same sort of handling in the baths of St. Sophia, at Constantinople. But to its necessity, to its efficacy, to its desirableness, to its freedom from danger, we altogether demur. It is monstrous that a set of ignorant boobies, who know no more of anatomy than they know of the moon, should crack and unrivet mortality after this sort, under the plea of giving suppleness and pliability to the delicately-constructed human frame. A wretch shampooed the writer in the principal bath in Dublin two years ago, who essayed this process of violent and unmeasured roughness. He twisted, and cracked, and slapped us till we were on fire. We made up our minds to bear it without complaining, in order to see to what extent our friend would carry it, and how far we were capable of supporting such a terrific ordeal. We were sore for ten days at least. Mr. Erasmus Wilson seems to think that Asiatics, and Europeans born and bred in the East, enjoy a pliability of frame unknown to our Northern race. This may be so, and probably it is derived from the use of the bath from childhood before the joints are set. Such a circumstance may palliate and even excuse the kind of shampooing we have deprecated as injurious in the East; but it will not justify its adoption with Europeans of unductile structure and unsoftened organisms.

The great fault with most shampooers in our Anglo-Turkish baths is a want of tactile delicacy, arising from an ignorance of the human structure. A good and well-informed shampooer will begin softly and gently; he will toy with that delicate surface studded with millions of pores, and woo it into responsive sympathy with his “*manum doctam*.” Gradually the pressure will become firmer, especially over the joints; he will try to mould the muscular cushions to his finger and thumb; he will stretch the ligaments without tearing them, he will bend the joints as Nature bends them. He will not press (as many do in ignorance) hard down the course of the large nerves and lymphatics; he will do his work uniformly and without favour, not devoting more time to one limb than another, unless there is a difference in their structural integrity. It is dreadful to be shampooed in a one-sided manner, and made to feel that

* Quoted by Mr. Erasmus Wilson.

the skin is not brought equally on both halves of the body to a "just sense of its obligations."

There is a practice growing up among shampooers in the London baths which we take this opportunity of strongly deprecating; it is that of hurrying men through the sweating-rooms before they have duly unloosed the pores of the skin, and then attempting to supply the place of the soft and unctuous sudor, the existence of which is the first element of satisfactory shampooing, by means of water. For this purpose the shampooers have basins of water at hand, in which they dip their hands with a varying frequency. We submitted the other day (for the purpose of seeing the extent to which a so-called shampooer would carry it) to a visitation of this kind for some minutes; and then suggested to our pluvial friend the desirableness of fetching us an umbrella. It is a mistake to produce this artificial moisture, even where the perspiration is not abundant; but where it is otherwise, when the human fountains are at full play, there is no sort of excuse for it.*

3. Having passed through the elaborate process of shampooing, the bather is conducted into the Lavatory, where he is well washed with warm water, subjected to gentle friction with the glove, which should be made with the hair of the camel or the goat—our modern substitute for the Roman *strigil*. Thus writes an enthusiast:—

"The shampooer stands over you; you bend down to him, and he commences from the nape of the neck in long sweeps down the back, till he has started the skin; he coaxes it into rolls, keeping them in and up till within his hand they gather volume and length; he then successively strikes and brushes them away, and they fall right and left as if split from a dish of macaroni. The dead matter which will accumulate in a week, forms, when dry, a ball of the size of the fist."

This may be so with the novitiates and the unclean, but not with a properly-educated skin. There is comparatively little epidermis peels off in those who are habituated to the bath. We are disposed to think (and there are those who agree with us) that it would be better to use the glove prior to the first lavement with warm water, immediately on issuing from the

* There are several admirable shampooers at the Hammam in Jermyn Street, who can handle a human sufferer with soft and beautiful precision, or grasp a living personality of health with force and power. They have a thorough knowledge of their profession.

"Percurrit agili corpus arte tractatrix,
Manumque doctam spargit omnibus membris."

Calidarium, while the skin is still unctuous with its own secretion.

4. We are now ready for the washing with Castile soap, worked up into a frothy lather by the fibres of the palm. Streams of warm water follow, and, thirsting at every pore, we are longing for the cold plunge, or the "beehive," or the douche. This is the crowning luxury of the bath, from which there is no danger, which Nature—the safest guide—suggests to you by the sensations imparted by the previous process; by which the sense of fatigue is banished, by which the pores of the skin are closed against further exudation, unless (as in those of most robust and vigorous health) the reaction is so great as to cause fresh transpiration. But these can bear it, and it is a sign of their vigour and their power. Perfect repose in either a sitting or recumbent position is now necessary. Coffee or lemonade, or a substantial repast, may also be taken to advantage, according to the individual taste of the bather. The body should continue partially exposed, or not, the sensation of each bather being the proper guide.

And now we dress, and are ready to return to the outside world, to take our places among "the great unwashed," renovated both in body and mind, and in a condition to "bid defiance alike to wind or weather, rheum, cough, or catarrh."

These are the processes which, in successive stages, make up and constitute "the bath"—a name fit only to be applied to that elaborate combination of actions which we have here delineated, and of which the splashy puddling of an ordinary ablution is quite unworthy. This is "the bath that cleanses the inward as well as the outward man, that is applicable to every age, that is adapted to make health healthier, and alleviate disease whatever its stage or severity."

Nor are its hygienic and medical advantages alone confined to man. In Ireland they have been extensively employed by Dr. Barter, for farming purposes. Horses, cattle, sheep, dogs, swine, and poultry have alike been subjected to the bath. He says that the proportion of deaths to recoveries in the treatment of cattle distemper thereby does not now exceed one in ten, while it used to be one in three. Many of our readers will call to mind the letter of Admiral Rous in the *Times* of March 26th, 1863, where he contrasts the barbarous system of modern horse-training by "drastic purgatives, hot clothing, hot stables, and four and five-mile sweats," with that "modern revolution," effected chiefly by Mr. Urquhart, "which will enable a trainer to bring his horses to the post in first-rate condition, without subjecting them to a destructive apprenticeship."

ship." Any process which will bring a horse into condition, and yet save his legs, must be of immense importance to the racing community and to the poor horse himself. We have not space to extend our inquiries into this subject. In connection with farm purposes generally a wide field of investigation has been cultivated, and a rich harvest of information garnered in. The mortality in young stock is diminished; colds are less frequent; the productiveness of stock is increased, as also its power of creating flesh and milk; and many collateral benefits are derived. The "Manual" contains an amount of interesting information on this point, which will repay every agricultural reader.

Thus, with the limited means at our disposal, we have brought under consideration the important subject of the revival of the Turkish or Roman bath amongst us. Our perfect type of bath is the Roman bath without its anointing—the Turkish bath without its undue moisture—in fact, the "hot-air bath." From a careful study of its effects both in health and disease, we have not hesitated to manifest our belief in its efficacy, and our desire that it should become a thoroughly national institution. We have endeavoured to divest the public mind of the prejudices against it, and to point out the traditional absurdities which have hitherto prevailed with respect to the transition from heat to cold. We have shown the importance of the proper physiological understanding of the skin, in order to make it subservient to its true uses, and impart to it a "just sense of its obligations." The entire subject of the bath has been approached by us as we should approach any other therapeutical agent. The question is not whether "Thermotherapie" is calculated to damage the interests of the profession as a body, but whether it can advance the general cause of suffering humanity. We believe that both hygienically and medically it can do this, and that Dr. Millengen has made no exaggerated statement in saying that we are "engaged in an attempt which, if successful, will confer in an hygienic point of view, a service on our countrymen as eminent as the discovery that has immortalized the name of Jenner."

It remains for us only to caution the public against the spurious imitations of the genuine structure, which play their short but pernicious hour among the population of this great metropolis. Underground cellars, ill-ventilated and worse-lighted, should not constitute the home of this great revival among a people whose ambition is unmeasured and whose wealth is boundless. Under the superintendence of Mr. Urqu-

hart has been raised a "peerless temple," such as no other country in any quarter of the globe can boast of. It is "at once the finest bath in the world," as it was called by a daily paper in speaking of the recent visit thereto of the Prince of Wales. It is well built, it is well appointed, it is well served ; its air is dry, its water is pure, its ventilation is perfect, and its power of imparting delicious sensations is beyond all expression. May it serve as the model for many more in this country !

Beyond the narrow limit of each good man's own fireside, we thought there was only one paradise in England, and that it was the Crystal Palace. There is another. It is the Hammam in Jermyn Street.

